EAST TEXAS STATE UNIVERSITY CENTENNIAL founded 1889

Aftermath

Vol.3, Num.1 The East Texas State University Mathematics Department Newsletter Fall 1989

THIRD ANNUAL HOMECOMING ALUMNI BREAKFAST SCHEDULED

The 1989 Centennial Homecoming Alumni Breakfast will be held at 8:30 a.m., Saturday, October 28, 1989, in the Bluebonnet-Pecan-Friendship rooms in the Sam Rayburn Memorial Student Center. There were about 50 alumni, faculty and students present for last year's breakfast. We hope to improve on that this year. If you would like to attend, please fill out the form found elsewhere in this newsletter and mail it to the ETSU Mathematics Department by October 20, 1989. We hope to see you there.

ALUMNI NEWS

This issue of AFTERMATH and the next will exhaust our file of information we have received about our alumni. Much of our information is also two years old and, therefore, could be inaccurate. Please update your file with current information you feel would be interesting to other alumni. Perhaps a classmate you have lost touch with will be able to contact you as a result. Please use the form found elsewhere in this newsletter or whatever means you like to send us your update.

ALPHA GAMMA ALPHA-PI MU EPSILON MATHEMATICS CLUBS ACTIVITIES

New members of Pi Mu Epsilon during the 1988-89 school year were Patricia D. Allen (Wylie), James R. Aslan (Commerce), Kevin T. Brewer (Commerce), Karen J. Case (Bonham), Susan D. Crow (Campbell), Melody A. Jolly (Commerce), Sandra K. Johnson (Commerce), Judith A. Linker (Mesquite), Deborah L. Morgan (Commerce), Cynthia S. Steward (Cooper), Nancy J. Waldrum (Paris) and Julie Cay Wood (Mt. Vernon). Joining Alpha Gamma Alpha were David Neal Adams, Lynn Payne-Sitzes, C. Annetta Thomas and Betty Tillman.

Our Spring Banquet was held on March 9, 1989, and the speaker was W. L. Blow (BS,77) from E-Systems, Greenville. If you are interested in attending next year's banquet, or would like any information about the clubs, please contact the faculty sponsor, John Heath, at (214) 886-5946.

MATHEMATICS DEPARTMENT SPORTS ACTIVITIES FOR 1988-89

The Mathematics Department is maintaining involvement in intramural sports with John Heath as facilitator of the basketball and softball teams. Stuart Anderson (Math), Wendell Edwards (Accounting) and Bob Titus (Educ. Media and Tech.) chose to sit out the basketball season and were replaced by Darrell Sturdivant (Computer Center) and Andy Weeks (Math Office worker). This move lowered the average age of our team several years and we had a reasonably successful 4 - 2 season. (In all fairness to Bob Titus, he was in China and we were unable to get him to return.)

The softball team was enhanced by a pair of fleet-footed outfielders, James Patterson and Todd Hughes (Computer Science) and catcher Laura Corrigan (Math Teaching Assistant). The addition of these go-getters turned what could have been a disastrous campaign into a rather mediocre 2 - 5 season.

Most faculty members on the team feel that these teams are a good way to interact with the students and feel that the students are impressed when their instructors can get out, lighten up, and play some ball. Mathematics faculty on the team are Anderson, Davenport, Heath, Jones and Underhill.

SEMINAR PROGRAMS FOR 1988-89

The series of mathematical seminars that was begun in October, 1987 was continued through the 1988-89 school year. They were held in Binnion 301 at 3:00.

The first one was presented on September 21, 1988 by Dr. John Lamb, Jr. entitled "Optical Illusions;" a slide show of 40 illusions and a discussion on why they work. The second seminar was presented by Dr. Bill Aslan on October 18, 1988 on one of the AIM programs from the MAA entitled "Pricing Auto Insurance."

On November 16, 1988, Dr. John Lamb, Jr. discussed whether or not a crescent Mars could ever be seen from Earth. On February 8, 1989 and February 15, 1989, Dr. John Lamb, Jr. presented a two-part seminar on another AIM program from the MAA entitled "Capturing a Satellite."

Dr. Howard Lambert presented a talk entitled "Riemann Sums Versus the Trapeziodal Rule" on March 1, 1989. On March 22, 1989, Dr. Dennis Grantham presented "Right and Left Triangles."

The last seminar of the academic year was a team effort by Dr. Bill Aslan and Dr. John Lamb, Jr. They presented the talks they gave at the annual meeting of the Texas Section of the MAA plus a report by Dr. Lamb on the Chautauqua course he took at UT Austin on the astronomy of the American Indians.

MATHEMATICS FACULTY ACTIVITIES

The Mathematics Department faculty for the Fall, 1989 term consists of Stuart Anderson, Bill Aslan, Dale Bedgood, Archie Brock, John Davenport, Dennis Grantham, John Heath, Charles Jones, John Lamb, Jr., Howard Lambert and Vance Underhill. Besides teaching courses, some of them have been active in research and other professional activities.

• **Dr. Stuart Anderson** presented a paper at the University of California, Irvine in January. The paper described a cooperative effort with Paris Junior College for offering remedial mathematics.

• **Dr. John Lamb, Jr.** presented a paper on April 7, 1989 at the annual meeting of the Texas Section of The Mathematical Association of America entitled "Can We Ever See a Crescent Mars From Earth?"

• **Dr. Bill Aslan** presented a paper at the same meeting on the analysis he and **Dr. Lamb** did on the Durer Angle Trisection Approximation Method.

• **Dr. John Lamb, Jr.** has published three articles in 1989; one entitled "Error Analysis of the Kopf-Perron Angle Trisection Approximation" with **Dr. Aslan** in the January, 1989 issue of School Science and Mathematics; another entitled "Factorialsum Number Chains" in the February issue of School Science and Mathematics and a third entitled "An Error Analysis of Two Similar Angle Trisection Methods" with **Lynn Harpold** in the March issue of the Texas Mathematics Teacher.

• **Dr. W. Vance Underhill** has published an article entitled "Note on a Well Known Limit" in the Pi Mu Epsilon Journal, Vol. 8, No. 10, page 672.

• **Dr. Bill Aslan** and **Dr. John Lamb, Jr.** presented an hour-long program on their work with approximate angle trisection methods at the annual national meeting of the School Science and Mathematics Association on December 2nd in Austin, Texas and at the annual meeting of the Conference on the Advancement of Mathematics Teaching on August 2nd in San Antonio, Texas.

• On July 6, 1989, **Dr. John Lamb, Jr.** was elected Secretary of the newly formed chapter of the National Space Society at E-Systems in Greenville, Texas.

• **Dr. Dale R. Bedgood** was elected President of the Texas Section of the Mathematical Association of America at a meeting of that group in April. He is to be congratulated for this high honor. His term of office will begin in 1990.

• **Dr. W. Vance Underhill** attended a Chautauqua course entitled "The New Karmarkar Algorithm For Linear Programming" in May at the Oregon Graduate Center in Portland, Oregon.

• **Dr. Archie Brock** attended a meeting of the American Statistical Association in San Antonio in April.

• **Dr. Howard Lambert** attended a conference on "Strategies for Teaching Calculus" at Morehouse College in Atlanta, Georgia. The conference, held in April, featured presentations by noted mathematicians from across the country.

• **Dr. John Lamb, Jr.** attended a Chautauqua course entitled "Archaeo- and Ethno-Astronomy of the Americas" in March at the University of Texas at Austin in Austin, Texas.

• **Dr. Stuart Anderson** was one of forty mathematics educators from across the country selected to attend a Mathematicians and Education Reform Network Workshop. The workshop, supported by the National Science Foundation, was held at the University of California, Berkeley in May.

BOOK REVIEW

BY

W. VANCE UNDERHILL

Archimedes' Revenge by Paul Hoffman, W. W. Norton and Co., 1988, 285 pages. In the past few years there have been a number of books which attempt to bring to the layman some sort of understanding of modern mathematics. The difficulty in this enterprise is the selection of topics which convey the spirit of modern mathematics and yet require little or no technical background. Hoffman declares that the aim of his book is "to sketch the range and scope of mathematics." Apparently the author did not intend this statement to be taken at face value, for he goes on to admit that the book is "quirky in its choice of subjects."

The first of four chapters deals with number theory. Prime numbers and perfect numbers are considered at some length, as well as the cattle problem of Archimedes, from which the book gets its title. One of the more interesting items is a description, with diagrams, of Stanislaw Ulam's computer search for patterns of primes on Maniac II. Cryptography is discussed, both ancient and modern, and the author gives some fascinating instances of codes playing a key role in history. He presents a detailed account of the famous Beale ciphers which date back to 1820 and which, if they are ever deciphered, will allegedly disclose the location of a hole in the ground in Virginia containing $17 million in treasure. In fact the book contains the complete ciphers themselves, which have long been common knowledge.

Hoffman's second chapter is devoted to certain aspects of geometry. Tiling and packing problems are considered, as

well as the difficulties involved in the design and construction of a three-and-one-half story multicolored aluminum Easter egg in Alberta (pictured on the cover). The Mobius strip makes a predictable appearance, as does the Four Color Problem. A discussion of infinite minimal surfaces is perhaps beyond the appreciation of most readers.

The longest chapter, and quite possibly the author's favorite, deals with computers. Topics covered include the Turing Machine, the Traveling Salesman Problem, and the current thinking concerning NP-complete problems. This setting is also used to consider Euler's solution of the Konigsberg Bridge Problem. An entire section is devoted to chess-playing computers, and the chapter concludes with a long and interesting discussion of the nature of future computing machines, with considerable attention given to the Connection Machine designed by Daniel Hillis.

Hoffman's last chapter is entitled "One Man, One Vote." Frequently citing results of Steven Brams, the author compares various methods of voting in a democracy and some of the mathematical paradoxes that occur. Also considered is the theory of congressional apportionment. The methods proposed by Hamilton, Jefferson, Webster, and the mathematician Edward Huntington are considered, with much of the material based on the work of Balinski and Young. By means of simple examples the reader is shown that any apportionment method has inherent problems.

Hoffman has chosen his topics carefully and presents them with enthusiasm but without the technical details required by a professional. Still, there are many juicy facts (e.g., B. F. Goodrich holds a patent on a Mobius Strip conveyor belt), and the book is fun to read. There is no bibliography, but a handful of books are listed under suggested reading.

MATHEMATICS DEPARTMENT HISTORY AT ETSU

Since this is the Centennial Year of ETSU, we looked into the history of the Mathematics Department. Information available covers the period from 1917 to the present. Some familiar names are sure to be found below.

For the 1917-18 school year, the catalog listed two faculty members, Mr. J. M. Bledsoe and Mr. A. H. Cowling. At this time, departments did not have "heads" identified or named. It wasn't until the school year 1919-20 that any of the academic departments listed heads.

Beginning with the fall semester, 1919, Bledsoe was named to the position of Head, Department of Mathematics. He held this position until 1947.

Generally, there were four to six faculty listed for the mathematics department during Mr. Bledsoe's tenure. Some familiar names, in addition to Mr. Cowling, are L. I. Smith (Business Manager), Sam Whitley (Dean), C. W. LaGrone, Fae Harris, E. O. Box, Vera Smith, and J. V. Cooke. Mr. Box taught in the Mathematics Department from 1931 until 1947 when he transferred to the Department of Physics.

Dr. Cecil B. Wright became a full time faculty member in 1940, although he served as a visiting faculty member beginning in 1934. These visiting appointments usually involved only the summers. He was a member of the faculty at Southern Methodist University during most of the period 1934-1940. Beginning in 1947, Dr. Wright was named Head of the Mathematics Department, a post he held until 1966. Additionally, he served from 1963 until 1967 as the first dean of the college of arts and sciences.

ALUMNI BREAKFAST RESERVATION FORM AND / OR ALUMNI NEWS UPDATE

Name : _____

Address : _____

City, State & Zip : _____

Phone : _____

Please reserve _____ places at the Homecoming Alumni Breakfast at $5.00 each.

Total Enclosed : $_____

My news for the Alumni News Column is : _____

_____

_____

_____

Mr. Robert Baker and Mr. W. W. (Bub) Taylor, two very familiar names to former students, joined the mathematics faculty in 1947. Both taught for a time in the training school of ETSTC.

Dr. Glyn Corley, who joined the ETSU faculty in 1963, was named to the position of Head of the Department of Mathematics in 1966. Dr. Corley resigned after one year in this position.

Dr. Dale R. Bedgood was invited to ETSU and was named the fourth department head in 1967. He served in the position until 1988 and continues as a member of the faculty.

Following Dr. Bedgood as department head in 1988 was Dr. Stuart Anderson. Dr. Anderson joined the faculty of ETSU in 1973.

The size of the faculty increased steadily beginning about 1960 and reached its maximum size about 1975 with a staff of 15 full time faculty members and a total full time equivalent staff of approximately 24.

RECENT GRADUATES PURSUE ADVANCED DEGREES

Over the last few years, the Department of Mathematics has had some excellent students. Upon graduation, many of these begin work in industry, business or teaching. However, a good number have chosen the more hazardous, less affluent life style of a graduate student.

At the present time, James Epperson and Stephanie Tyler are pursuing doctoral degrees in mathematics at the University of Texas. Charlotte Simmons, Steve Reznik, Jeff Griffin, Paul Warren and Shawn Eagleton are studying mathematics in graduate school at the University of North Texas. Another former student, Myra Snell, has just completed her master's degree in mathematics at the University of California, Berkeley. John Griffith and Chris Esworthy are working on graduate degrees in physics at Oregon State and Georgia Tech, respectively. In addition, Tom Hooten recently finished his master's degree in physics at Vanderbilt.

Of course, several are enrolled in our graduate program at ETSU. This semester, Bryan Allen, Anita Armstrong, James Aslan, Jean Jones, James Ochoa, Sue Sanders and Cynthia Steward are graduate assistants in our department.

ALUMNI FOCUS

This column will highlight the accomplishments of a former ETSU mathematics student. Some of the information used here was reported by AP writer Mike Cochran.

George McAlister is a man of many interests. Born on a cotton farm in Hunt County, Texas, he is a former coach, educator and inventor turned businessman, rancher, historian and author. He graduated from Commerce High School and, after interrupting his collegiate studies in 1942 to enlist in the Marines, obtained B.S. and M.S. degrees in mathematics, with a minor in history from East Texas State.

He later demonstrated his versatility at Howard County Junior College in Big Spring, where he and his wife raised three sons while he served as dean of men, chairman of the mathematics department, coach of the track team and amateur inventor. Recalled to active duty in 1950, he returned to Big Spring after the Korean war and resumed teaching. In 1955 he founded a company called GAMCO to create and build teaching aids for mathematics students.

Working out of his garage, he built the first classroom computer sold in America and the first electronic teaching machine. The sale of GAMCO in 1966, which made him a financial success, freed McAlister to pursue his ranching and writing interests and to devote more time to historical research. His first novel, "Nothing is Forever," was based on the early life of Col. William B. Travis. That book evolved into a second novel, "A Time to Love ... A Time to Die." This led in turn to "Alamo ... The Price of Freedom," a non-fiction book which McAlister describes as "history as I view it and my personal research reveals it."

Because of his interest in and knowledge of the subject, McAlister envisioned making a movie based on the battle of the Alamo. He was the moving force in building the IMAX theater in San Antonio, Texas, and co-wrote the screenplay for the film, "Alamo ... The Price of Freedom." Academy Award-winning filmmaker Keith Merrill directed the movie, part of a $7.2 million project that includes the IMAX theater with its 84 foot wide, six story high screen. The 426-seat theater is housed in the Rivercenter Mall, which overlooks the Alamo grounds. "The Price of Freedom" was filmed near Brackettville, where John Wayne built the movie set for his epic 1960 film, "The Alamo."

"There are two great symbols of freedom in America," McAlister says. "First is the Statue of Liberty. But it is just that - a symbol of freedom. Then there is that old stone mission, the Alamo, a shrine to the price of freedom. The defenders of the Alamo were willing to die for freedom. And more than 3 million people from all over the world came to the Alamo last year to pay homage to those 189 brave men who gave their lives that Texas might be free."

While devoted to accuracy in making the movie, McAlister points out that much of what occurred at the Alamo is open to speculation and individual interpretation. Still, he spent 12 years researching his books. His travels took him to Goliad, San Jacinto, Washington-on-the-Brazos and other

battle sites and to Louisiana, Tennessee, South Carolina and Alabama to visit the hometowns of the most famous defenders of the Alamo. He also traveled unusual territory in describing the Alamo contribution of the Tejanos, the nine Mexicans who supported the Texas cause.

McAlister, who now lives in San Antonio, has also co-authored a book on the game of dominoes. He is an avid collector of old and unusual domino sets. Perhaps his interest in this game of logic springs from his mathematics training. Whatever the reason, we are proud to claim him as a graduate of East Texas State University.

DEPARTMENT HEAD'S COLUMN

by Stuart Anderson

The Mathematics Department has a long list of challenging and interesting projects for the coming year. The Texas Academic Skills Program (TASP) is in effect for the first time, causing several changes and experiments in our Freshman level courses. Our attention is also occupied by the usual teaching and research efforts. However, because of the importance of the alumni in our endeavors, our busy agenda includes this communication with you.

We are teaching an undergraduate History of Mathematics course for the first time this semester. The course will have two semesters of calculus as a prerequisite. Over the last few years, many mathematics educators have emphasized the need for such a course. However, some departments have been reluctant to offer one because of the problems encountered in teaching it. The presentation of material is certainly different from that found in traditional mathematics courses. In addition, most mathematicians are not trained in the history of their subject; the bulk of what they know has been picked up in bits and pieces and is sometimes concentrated in one or two areas.

To address these problems and to offer a quality course, we are using a "team teaching" approach - each member of the faculty is teaching a portion of the course. We are fortunate to have Dr. Underhill, our resident expert on the history of mathematics, to use as an information source. Dr. Bedgood is the coordinator of the class. He has done a great deal of work in organizing the material and matching people with appropriate topics.

Throughout the spring semester, seminars on the history of mathematics were held in preparation for the new course. Each member of the faculty contributed to these by studying and presenting material from the area with which they were most familiar. There was a remarkably good balance of subjects and, when taken as a whole, they comprised a respectable syllabus for the course.

We are excited about the course and its novel format. It is expected that History of Mathematics will become an important part of our undergraduate curriculum.

We sincerely desire for you to come visit us during this year of the ETSU Centennial. Our lounge, always a good place for visiting, has recently been improved by the addition of a set of Gordon Thomas paintings commemorating the ETSU Centennial. These were donated by Dr. John Lamb, Jr. Dr. Lamb also donated four Michael Escher drawings.

Thanks to the support of many of you, we will be awarding a new scholarship at the Homecoming Breakfast in October. The first W. W. (Bub) Taylor scholarship will be given to an outstanding mathematics major. We appreciate very much your part in making this possible. In addition to honoring Bub Taylor, the award will enhance our program and help us attract quality students.

Professor Taylor will be on hand at the breakfast to present the first scholarship. We hope that many of you will be able to come and see Bub and Virginia at this time.

ALUMNI NOTES

Byous, Charles BS(40)
747 Loganwood
Richardson, TX 75080
Retired Mobil Oil Co.

Crass, Jo BS(59), MEd(60)
824 Norton Circle
Mesquite, TX 75149
Dept. Head, Mesquite H.S.

Giddens, Richard BA(36), MA(40)
1107 Green River Trail
Cleburne, TX 76031
Retired US Dept. Ag.

Lee, Rubye BS(47), MEd(62)
2018 Mimosa
Corsicana, TX 75110
Retired after teaching 40 years

Roberts, Charles
BA(36), MA(46), EdD(60)
Rt. 1, Box 1E
Winnsboro, TX 75494
Retired National Center for Educational Statistics

Rutland, Leon BS(40), MS(41)
1391 Locust Ave.
Blacksburg, VA 24060
PhD U of Co. Head and Teacher at Virginia Tech.

Walker, Lathan BS(48)
1603 Harry
Monahans, TX 79756
Superintendant, Principal
and Teacher Monahans - 36 years

Almon, Geary BS(64)
Rt. 2
Cumby, TX 75433
Captain Piedmont Airlines

Follis, Thomas BS(69)
3478 W. Shenandoah
Orange Park, FL 32073
Owner, Computer
Consulting Business

Hoskins, Wanda BS(69)
1310 Mohawk Dr.
Arlington, TX 76012
Classroom Teacher

Love, Mike BS(69), MS(74)
Rt. 7, Box 112
Mt. Pleasant, TX 75455
Junior High Math Teacher
Mt. Pleasant 18 years

Patrick, Shirley BS(68), MSLS(78)
P.O. Box 647
Matador, TX 79244
Math Teacher, H.S.
Motley Co. ISD

Streit, Roy
BA(68), MA(70), PhD(78)
114 Lower Blvd.
New London, CT 06320
Assoc. Prof. Univ. Rhode Island

Adams, John BS(70)
2612 Taylor
Commerce, TX 75428
Manager Special Projects
E-Systems Greenville

Cangas, Jose BS(78)
14400 Montfort
Dallas, TX 75240
Software Supervisor Ericsson

DeOliviera, R., BS(73)
P.O. Box 8886
Talladega, AL 35160
Dir. Maint. Baptist Assembly

Fiedler, Julianne BS(76), MS(80)
Star Route 4 #15 George Hill Dr.
Dripping Springs, TX 78620
Real Est. Appraiser 1st Rep. Bank

Holbert, Susan BS(73), MS(75)
Rt. 2, Box 71
Campbell, TX 75422
Systems Eng. E-Sys. Greenville

Jones, Philip BS(78)
3132 Owens Lane
Mesquite, TX 75150
Software Eng. E-Sys. Garland

Martin, George BS(79), MS(84)
Rt. 4, Box 109A
Sulphur Springs, TX 75482
Math Teacher Greenville

McLaurin, Barbara BS(73)
2209 22nd St.
Lubbock, TX 79411
Owns Copies Plus

Siders, Helen BS(72)
1102 Romeira Dr.
Austin, TX 78757
Programmer Dept. Human
Services

Wallace, Patricia BA(72), MEd(76)
16102 Kempton Pk.
Spring, TX 77379
Math Teacher 15 years

Brown, Deborah BS(80), MS(86)
7635 Cavalier Ct.
Colorado Springs, CO 80920
Captain Air Force Acad.

Daniels, Timothy BS(85)
Rt. 1, Box 216
Bogata, TX 75417
Math Teacher Rusk H.S.
New London, TX

Kopel, Jerome MS(88)
5319 Kiamesha
Mesquite, TX 75150
Math Teacher Dallas Area

Mathematics Department
East Texas State University
Commerce, Texas 75428

Bulk Rate
U.S. Postage Paid
Permit No 63
Commerce, Texas 75428
Non-Profit Organization